

*Atty Docket: HES 2003-IP-012771
(1391-47600)*

Patent

REMARKS/ARGUMENTS

Status of Claims

Claims 1 and 3-44 are currently pending in this application.

Applicants hereby request further examination and reconsideration of the presently claimed application.

Claim Rejections – 35 U.S.C. § 103

Claims 1 and 3-44 stand rejected under 35 USC § 103(a) as being obvious over US 4,886,550 to *Alexander* in view of US 2002/056404 to *Chatterji*. Applicants respectfully submit that the prior art of record does not establish a *prima facie* case of obviousness as to the pending claims. According to MPEP 2142, three basic criteria must be met to establish a *prima facie* case of obviousness:

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.

Assuming for sake of argument that the combination of *Alexander* with *Chatterji* is proper (and without conceding such), the Examiner has nonetheless failed to establish a *prima facie* case of obviousness as such a combination does not teach or suggest all of the claim limitations. Independent claims 1, 21, and 39, as well as the remaining claims depending there from, each

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recite a combination of specific ingredients present in specific amounts that is not disclosed in the prior art. More specifically, independent claims 1, 21, and 39 each recite a grout composition comprising:

- (a) sodium bentonite present in an amount of from about 15% to about 45% by weight of the grout composition;
- (b) calcium bentonite present in an amount of from about 15% to about 45% by weight of the grout composition;
- (c) a silica material present in an amount of from about 10% to about 35% by weight of the grout composition; and
- (d) a carbon source present in an amount of from about 10% to about 75% by weight of the grout composition.

The Examiner relies on the primary reference, *Alexander*, as disclosing elements (a)-(c) outlined above. However, careful examination of *Alexander* reveals that the combination of specifically recited ingredients in the specifically recited amounts is not disclosed in *Alexander*. At col. 5, lines 13-16, *Alexander* discloses a dry grout comprising water-swellable clay, such as bentonite, in an amount of 80 to 99.5% by weight of the composition. *Alexander* further discloses at col. 2, lines 56-57 that sodium bentonite is a water swellable clay. Thus, at most, *Alexander* teaches a dry grout composition comprising 80 to 99.5% sodium bentonite. In contrast, Applicants disclose and claim a grout composition comprising from about 15 to 45% sodium bentonite, which is about half the amount disclosed by *Alexander*. Thus, *Alexander* does not teach or suggest element (a) of independent claims 1, 21, and 39.

As for elements (b) and (c), *Alexander* discloses at col. 5, lines 17-20 that the dry grout composition may optionally comprise a solid, particulate filler, particularly an essentially non-

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swellable colloidal clay, such as calcium bentonite, in an amount of 0 to 20% by weight of the composition. *Alexander* further discloses at col. 5, lines 58-64 that, in addition to calcium bentonite, the particulate filler may include silica materials. Thus, at most, *Alexander* teaches a dry grout composition comprising 0 to 20% calcium bentonite and/or silica material. In contrast, Applicants disclose and claim a grout composition having both calcium bentonite and a silica material in amounts significantly above those disclosed by *Alexander*. More specifically, Applicants disclose and claim a grout composition comprising from about 15 to 45% calcium bentonite and from about 10 to 35% silica material. In contrast to *Alexander*'s grout composition having 0 to 20% particulate filler, Applicants recite from about 25 to 80% of such materials. Thus, *Alexander* does not teach or suggest elements (b) and (c) of independent claims 1, 21, and 39.

Furthermore, independent claims 1 and 39 recite that when the grout composition is mixed with water, the resulting grout slurry has a thermal conductivity of greater than about 1.4 Btu/hr-ft-°F. As shown in Table 2 of the specification, Applicants demonstrate in Example 2 that grout slurries as recited in the pending claims provide greater thermal conductivity than several commercially available grout slurries. *Alexander*, alone or in combination with *Chatterji*, does not teach or suggest the specific grout compositions as set forth above, nor does the prior art of record teach or suggest a grout slurry having a thermal conductivity of greater than about 1.4 Btu/hr-ft-°F. Thus, independent claims 1 and 39 recited an additional limitation, namely the thermal conductivity of the grout slurry, that is not disclosed in the prior art of record.

In summary, the pending claims recite numerous elements that are not disclosed in the prior art. Section 103(a) expressly states (emphasis added):

“A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the

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subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."

Interpreting the claimed invention as a whole requires consideration of all claim limitations. Thus, Section 103(a) requires that the Examiner look at the claimed subject matter as a whole, which includes elements (a)-(c) outlined above, as well as an additional thermal conductivity limitation in claims 1 and 39. Applicants respectfully submit that the subject matter as a whole recited in the pending claims is not disclosed by the prior art of record, and thus the application is now in condition for allowance.

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CONCLUSION

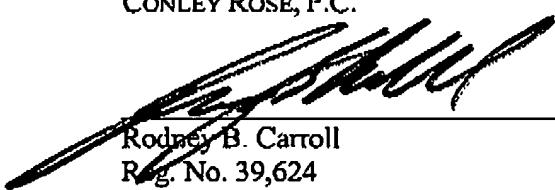
Consideration of the foregoing amendments and remarks, reconsideration of the application, and withdrawal of the rejections and objections is respectfully requested by Applicants. No new matter is introduced by way of the amendment. It is believed that each ground of rejection raised in the Office Action dated August 23, 2005 has been fully addressed. If any fee is due as a result of the filing of this paper, please appropriately charge such fee to Deposit Account Number 50-1515 of Conley Rose, P.C., Texas. If a petition for extension of time is necessary in order for this paper to be deemed timely filed, please consider this a petition therefore.

If a telephone conference would facilitate the resolution of any issue or expedite the prosecution of the application, the Examiner is invited to telephone the undersigned at the telephone number given below.

Respectfully submitted,

CONLEY ROSE, P.C.

Date: 11-11-05



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